Socially Responsible Investment in Malaysia: Behavioural Framework in Evaluating Investors' Decision Making Process

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ABSTRACT

Socially responsible investment (SRI) represents the method of investment that consider the impact (good or bad) of investment decisions on social, ethics, and/or environment within the context of rigorous financial analysis. Despite the evidence of an increasing interest among academics and industry players on SRI, the understanding of the psychological aspect of decision-making behaviour of SRI investors is still incomplete. Currently, no published evidence has been found in the context of Malaysian investors' decision – making behaviour regarding SRI. Thus, this study aims to examine the role of intention, attitude, subjective norms, perceived behavioural control and moral norm in explaining SRI behaviour by investors in Malaysia.

The underlying framework is the Theory of Planned Behaviour (TpB) that has been modified to incorporate moral norm as an additional explanatory variable. Studies that apply TpB in their measurement of behaviour indicate a mix of explanations for the relationship of constructs (i.e. - impact of attitude and moral norm) that influence behaviour through intention which warrant further examinations. Previous studies on SRI are extended by examining the role of intention in improving the relationships of TpB's attributes on behaviour.

This study uses Structural Equation Modelling (SEM) to ascertain the causal relationships between the variables and whether these relationships could be improved by intention as a mediator. The results based on a questionnaire survey of Malaysian investors suggest that attitude, subjective norm and moral norm have positive effect on intention which in turn positively affects behaviour towards SRI. The relationship for attitude, subjective norm, and moral norm to behaviour is improved significantly by intention as a mediator. Based on squared multiple correlations (R^2), it is found that the final structural model could explain 46% of the variance in intention and 50% of the variance in behaviour.

These results suggest that, together with social, ethical and environmental issues (SEE) and financial goals, SRI providers and policy makers should also consider the influence of social pressure from investors' friends and relatives in their SRI decision making. Investors' personal standards are also found to influence the intention and behaviour to invest in SRI. Furthermore the results of this study yielded critical information and insights that will enable Malaysian authorities as well as fund management companies to launch effective marketing strategies and develop SRI products.

Keywords: *SRI, TpB, investors' decision making behaviour, moral norm, intention, attitude, subjective norm, perceived behavioural control*

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1. Introduction

Traditionally, the concept of investing that incorporates social, ethical and environmental issues (SEE), is referred to as ethical investment (EI) (Simon 1972; Domini 1984). At present, it is commonly known as socially responsible investment (SRI). SRI has increasingly attracted interest among market players around the world (Hofmann, Hoelzl & Kirchler 2008; Nilsson 2008; Renneboog, Ter Horst & Zhang 2008). Despite the interest shown by both practitioners and academics, it has been agreed that evidence in the form of knowledge and theoretical explanation on the attributes that could explain SRI investors' decision – making behaviour remains inconclusive and requires further study (Williams 2007; Haigh, M. 2008; Haigh, Matthew & Guthrie 2008; Nilsson 2008; Glac 2009).

Investors' decision – making behaviour regarding SRI is influenced by financial and SEE goals (Nilsson 2008; Glac 2009; Nilsson 2009). However, how these goals are translated into actual investment behaviour towards SRI requires further examination (Hofmann, Hoelzl & Kirchler 2008; Glac 2009). It has been suggested that behaviour is significantly influenced by attitude through intention (Fishbein 1975; Ajzen, I 1991; Manstead 2000). Several studies (East 1993; Hofmann, Hoelzl & Kirchler 2008) have found that other factors apart attitude, i.e.; subjective norm, perceived behavioural control, and moral norm, also influences decision – making behaviour. However, the findings on these factors' influence on behaviour offers mixed explanations. That is, subjective norm influence behaviour more than attitude through intention which require further examination (East 1993; Godin, Conner & Sheeran 2005; Hofmann, Hoelzl & Kirchler 2008; Rivis, Sheeran & Armitage 2009).

This study examines Malaysian investors' decision – making behaviour towards SRI, as based on the Theory of Planned Behaviour (TpB) (Ajzen, I 1991). To date, no evidence has been published, specifically on the examination of SRI according to these investors' behaviours based on the theoretical framework of TpB. In the Islamic financial system, SRI in Malaysia is uniquely approached using Shariah – compliant shares/funds (Pitluck 2008). Shariah – compliant shares/funds, whose principles stem from the Qur'an, have been suggested as being similar to SRI in the global capital market (Wilson 1997; Ghoul & Karam 2007; Chong 2008; Pitluck 2008). Based on Shariah, investment in assets associated with alcohol, gambling and any other harmful activities to human and environment are considered haram (forbidden) (Ghoul & Karam 2007; Chong 2008; Pitluck 2008). In SRI, investments that are considered to be haram in Islam, are viewed as bringing harm than good and should be avoided (Hofmann, Hoelzl & Kirchler 2008; Renneboog, Ter Horst & Zhang 2008). Since, the underlying Islamic investment principle (haram) is consistent with SRI (negative investment), It can therefore be assumed, in principle, that Islamic investment and SRI are relatively the same. However, it is not the focus of this study to examine the difference between Islamic investment and SRI. This study examines SRI investors' decision making behaviour in the setting of Islamic financial system in Malaysia.

Both forms of investment (conventional and SRI) aim to achieve financial gain by including SEE considerations. However, the concept of investment of dual aims is

considered to be irrational in financial-based theory (Lewis & Mackenzie 2000a; Hofmann, Hoelzl & Kirchler 2008). Following portfolio theory (Markowitz 1952; Michelson et al. 2004), SEE considerations would either increase risk or reduce profitability of the portfolio, thus making SRI less efficient than a conventional portfolio (Elton et al. 1993; Carhart 1997; Cox, Brammer & Millington 2004).

This study uses SEM to ascertain the extent to which the TpB's attributes (attitude, subjective norm, perceived behavioural control, and intention) with moral norms, can predict investors' behaviour in the context of SRI in Malaysia. Full examination of TpB's constructs as recommended by Ajzen (1991, 2008) is followed to determine the causal relationship among constructs, and whether this relationship can be improved by intention as a mediator. The empirical data needed for this examination was collected from a series of field surveys among Malaysian fund managers, dealers' representatives and individual investors who participated in seminars organised by the Securities Commission of Malaysia in various centres nationwide.

This quantitative study replicates the measurement used by East (1993) that applies TpB, in explaining the linkages between investors' decision – making behaviour. Extending previous research on TpB in investors' behaviour (East 1993; Hofmann, Hoelzl & Kirchler 2008) and studies that include moral norm (Godin, Conner & Sheeran 2005; Rivis, Sheeran & Armitage 2009), the role of intention as a mediator of behaviour is examined here.

1.1 Research Objectives

The study aims to examine the relationship between TpB's attributes together with moral norm and investors' decision – making behaviour towards SRI, mediated by intention and translates this into a conceptual framework for a new research agenda according to Malaysian investors' perspectives.

In order to achieve the above aims, this study is set to achieve the three following objectives:

a. Applies and extends the TpB, by examining the influence of attributes (attitude, subjective norm, perceived behaviour control and moral norm) of Malaysian investors' decision – making behaviour towards SRI, with intention as a mediator. There is evidence that intention does not necessarily translate into behaviour (Haigh, M. 2008). It is important for us to identify these elements' influence and how they shape investors' decision – making process towards SRI, and we must also identify and validate important factors that are consistent with the TpB framework. This knowledge can elicit understanding on the dimensions of investors' decision – making behaviour towards SRI, specifically in the Malaysian investors' perspectives.
b. Extends recent studies, (East 1993; Godin, Conner & Sheeran 2005; Hofmann, Hoelzl & Kirchler 2008; Rivis, Sheeran & Armitage 2009), where positions, attitudes, subjective norm, perceived behavioural control and moral norms are attributes of behaviour through intentions.
c. Provides explanations on Malaysian investors' decision – making behaviour towards SRI according to the TpB's framework together with moral norms.

1.2 Motivation

This study examines Malaysian investors' behaviour towards SRI, by applying measurements stipulated in TpB as the key input to explain the relationship. The examination does not just extend the current findings of TpB, but also seeks to discover which attributes in TpB significantly explain Malaysian investors' behaviour towards SRI.

This study contributes to the body of knowledge by:

a. Clarifying the conflicting results found in the previous studies (East 1993; Godin, Conner & Sheeran 2005; Haigh, Matthew & Guthrie 2008; Hofmann, Hoelzl & Kirchler 2008; Rivis, Sheeran & Armitage 2009) which found that attitude does not necessarily become a major determinant of intention and at the same time intention does not necessarily translate into behaviour. In a recent study on SRI decision – making behaviour (Hofmann, Hoelzl & Kirchler 2008), the role of intention as a mediator has not been examined extensively.
b. Examining the impact of moral norm (East 1993; Godin, Conner & Sheeran 2005; Rivis, Sheeran & Armitage 2009) along with the general framework of TpB. To date, no evidence found for such examination has been done in the field of SRI investors' behaviour inquiry.

This study provides insights into the understanding of SRI investors' behavioural dimensions. Such an understanding provides knowledge on how the needs and motivations of investors can be better explained. The knowledge can assist relevant parties involved in fund management to offer the right products as well as employing the right strategy to market them. As for policy makers, the knowledge derived from this study can pave the way for a better understanding on their roles and responsibility in promoting an SRI environment in the capital market.

2. Literature Review

2.1 The SRI Background

In the literature, SRI has been called various terms, such as social, ethical, and sustainable investment (Frankel 1984; Bruyn 1987; Hylton 1992; Schlegelmilch 1997; Sparkes, Russell & Cowton 2004; Renneboog, Ter Horst & Zhang 2008). Although these terms have been used inter-changeably, socially responsible investment (SRI), and ethical investment (EI) are the two most widely used terms (Schueth 2003). It has been suggested that some investors are reluctant to use the word 'ethical' to describe their investment principles as it would indicate excessive deference to religious or moral values (Sparkes, Russell & Cowton 2004). Hence, for the purpose of this study, the term SRI will be used.

Several studies have been conducted on SRI investors behaviour as based on motives, psychology and decision – making have suggested that these still require further clarification because the findings are largely descriptive in nature (Rosen B. N. 1991; Anand 1992; Lewis & Mackenzie 2000a; Hofmann, Hoelzl & Kirchler 2008; Glac 2009) or a comparison of characteristics between SRI and non-SRI investors (Lewis 2001; Tippet 2001; McLachlan & Gardner 2004). Despite a few theoretical models

being developed to understand SRI investors' behaviour (Nilsson 2008; Glac 2009), the questions on what factors that motivate investors to consider SRI remains unanswered. What has been agreed to is that investors' decision regarding SRI are very much influenced by their attitudes to social, ethical and environmental issues as well as financial goals (Bollen 2007; Nilsson 2008; Glac 2009) . However, how these criteria have been translated into an actual SRI investment behaviour, in a real market setting, requires further research (Hofmann, Hoelzl & Kirchler 2008; Glac 2009).

2.2 The Dimension of Investors' Behaviour

Several studies have been conducted on investors' behaviour. Various approaches have been used to understand further the factors that influence investors' behaviour in respect to investment decisions. Among the most widely used model to study human behaviour is one developed by Ajzen (1991). Ajzen's (1991) theory of planned behaviour (TpB) is an extended model of the theory of reasoned action (Ajzen, I, and Fishbein, M. 1980) which is grounded in the expectancy value formulation (Fishbein 1975; Ajzen, I, and Fishbein, M. 1980). The general framework of TpB places attitudes, subjective norm and perceived behavioural control as determinants to behaviour through their role in establishing intention (Ajzen, I 1991). The TpB is based on utility-oriented, rational reflection, assuming that the research participants are prudent people whose behavioural decisions are based on cost-benefit analyses (Manstead 2000).

TpB has been widely researched to predict behaviour across a variety of settings and is designed to explain most human behaviour (Ajzen, I 1991; Pavlou & Fygenson 2006; Yousafzai, Foxall & Pallister 2010). Although it has been agreed that TpB is able to predict behaviour, the model has been criticised for neglecting the consideration of personal moral standards (Manstead 2000). Ajzen (1991, 2002) agreed that moral norms may prove a useful addition to TpB and suggests further research on this theme. There is evidence to support the contention that moral norm could increase the power of the TpB to predict and explain ethical behaviour (Beck 1991; Manstead 2000; Buchan 2005). Moral norms are regarded as one's perception of the moral correctness or incorrectness of performing behaviour (Ajzen, I 1991; Sparkes, Russell & Cowton 2004) and take account of personal feelings towards responsibility to perform, or refuse to perform a certain behaviour (Ajzen, I 1991). It has been suggested that moral norm should have a significant influence on behavioural performance with a moral or ethical dimension, and work in parallel with attitudes, subjective norms, and perceived behavioural control (Conner & Armitage 1998).

In regard to the relationship of between moral norm and intention, there is consistent evidence that the inclusion of moral norms significantly contributes to the understanding of intention (Manstead 2000). Kurland (1995) argued that the more relevant a situation is, the more pronounced moral norms have a role to play in the prediction of intention (Kurland 1995). Obviously, moral considerations are most prominent when one's self-interest and the interest of others are at odds with each other (Kaiser & Scheuthle 2003). Therefore, it can be argued that moral norm can be a factor that explains why some investors believe in SRI and some others do not.

East (1993) who was among the earliest to apply the TpB in the field of personal investment addressed two specific questions to understand investors' behaviours. The first was to distinguish whether self-reported factors affected the shares application

made by members of the public; the second was to validate the TpB as a method to predict and explain investors' behaviours.

To the TpB, East (1993) included investors' personal norm (PN) and past experience (PE) in its measurement of intention and found there was no evidence to support PN & PE as an antecedent to intention-behaviour relationship as it was well explained by attitude. PN as defined by East (1993) is one's personal standard to perform a specific behaviour. This definition is consistent with the description given in the literature for a moral norm which reflects one's perception of moral correctness or incorrectness while performing behaviour. Additionally, it takes account of personal feelings towards responsibility to perform, or refuse to perform certain behaviour (Ajzen, I 1991; Manstead 2000; Sparkes, Russell & Cowton 2004).

However, in another application of TpB, Godin (2005) through an examination of health issues (smoking, driving habits, universal precautions application, exercising) found that intentions associated with moral norms better predicted behaviour compared to intentions associated with attitudes. In response to an argument that the 'individual sometimes act in response to their own self-expectations, their own personal norms' (Schwarts 1977), Godin's (2005) survey revealed that moral norm was a better predictor of intention among the morally aligned intention group. Even though the findings by Godin (2005) derived from undergraduate students at the University of Sheffield, the evidence presented contradicted East's (1993) findings.

In another moral norm related study, Rivis (2009) applied meta-analysis to determine the predictive validity of anticipated effect and moral norms in the TpB. After a medium-to-large sample-weighted average correlation was obtained, the results revealed that anticipated effect and moral norms increased the variance explained in intentions (5% and 3% respectively). Intention mediated the influence of both variables on behaviour (Rivis, Sheeran & Armitage 2009). Rivis (2009) claims that through moderator analyses, younger samples and behaviours with moral dimensions were associated with stronger moral norms - intention relationships.

This study hypothesizes (along with the general framework of TpB) that moral norms positively influence both intention and behaviour. The earlier mixed findings (East 1993; Godin, Conner & Sheeran 2005; Rivis, Sheeran & Armitage 2009) warrants further research to confirm that moral norms along with the general framework of TpB have causal impacts on intentions-behaviour relationships.

In the context of SRI, Hofmann (2008) compared TpB, multiple attribute utility theory (MAUT) and the issue-contingent model of ethical decision – making in organizations (Jones 1991) in order to further understand SRI investors' decision – making behaviour. Using survey data, the study sought to find a suitable explanation for increasing interest showed by investors towards SRI. In an experimental setting, 141 students at Vienna University recruited through personal contacts and emails participated in a computerized market for shares trading. The setting addressed respondents' socially responsible convictions in their behaviour in buying and selling shares based on companies variations on moral commitment as well as profitability level. The discussion on the results reveal that only one variable in Jones's model (moral intensity, β=-1.37, p=0.0039) is significant in explaining the SRI investors' behaviour. While MAUT cannot constitute morality as a factor, the results based on TpB measurements

provide mixed results compared to East's (1993) findings. Apart from perceived behaviour control, only scales on attitude and subjective norm were significant and gave good reliability.

This indicates attitude and subjective norm correlate much higher with intention as compared to perceived behavioural control. Although, the author does not analyse the TpB as how it should be (i.e.; belief factors were not included), consistent with East (1993), the author holds the view that intention, as in the TpB framework, can explain behaviour. While intention, was explained by attitude and subjective norm. This finding contradicts East (1993) who claimed that perceived behavioural control also influences investors' intentions. Even though the study was experimental and did not use real market settings, the findings did substantially supported TpB as a model that can explain the behaviour of SRI investors. These mixed results, certainly pave the way for further research. The result from a similar field of inquiry but based on feedback from real investors would certainly give a more representative explanation and a practical implication of TpB. Similar to East (1993), no inference was made by the author to establish intention as a mediator of attitude, subjective norm and perceived behavioural control to behaviour which requires further explanation. There is evidence to support that intention mediate the relationship between antecedent of intention to behaviour. In an examination on online pre-purchase intentions model (Shim et al. 2001), it has been found that the relationship between the use of information on internet for purchasing and other predictors (i.e.; attitude, perceived control, and past experience) was mediated by intention.

2.3 SRI in Malaysia

In Malaysia, the approach towards SRI is relatively different when compared to other countries. Normally, SRI is an approach according to SEE considerations (Hofmann, Hoelzl & Kirchler 2008; Nilsson 2008; Glac 2009). However, in Malaysia, the criteria for SEE are influenced by the Islamic financial system used in that country.

The concept of SRI is not new and has been a part of Malaysia's economic system, usually known as of Islamic Investment Funds (Dusuki 2007; Chong 2008; Pitluck 2008). The introduction of "Dana Al-Aiman" in 1968 by ASM Investment Services Bhd, marked the first ethical fund introduced in Malaysia. The Mayban Ethical Trust Fund managed by Maybank Management Bhd launched in 2003 was the first SRI fund. The introduction of the said funds has provided Malaysia with the foundation for further expansion of SRI funds. The development of the SRI industry with an active implementation of corporate social responsibility (CSR) in developed countries was commented on by former Prime Minister of Malaysia, Abdullah Badawi. In the 2006 Malaysian Budget speech, Badawi announced that all publicly listed companies in Malaysia had to disclose their CSR activities and instructed government-linked fund management companies, such as Employee Provident Fund to consider highly SR aspects in their investment decisions.

In response to this, Bursa Malaysia (Malaysia Stock Exchange) introduced its own CSR framework in 2006 which focused on environment, community, market place, and the work place. Prior to that, Bursa Malaysia divided all companies listed on the Stock Exchange into two areas, namely; shariah and non-shariah compliance companies. Shariah refers to Islamic economic laws which are grounded in the Qur'an. The action

taken by Bursa Malaysia is strictly guided by Shariah Advisory Council (Pitluck 2008).The evolution as well as to what extent the Malaysia's SRI industry has grown since then, requires further study.

2.4 Research Questions

There are two research questions developed for this study:

a) How do the TpB's attributes together with moral norms influence Malaysian investors' decision – making behaviour towards SRI?
b) Can the intention to invest in SRI as the mediating variable improve the relationship between the TpB's attributes together with moral norms and investors' SRI decision – making behaviour?

2.5 Hypotheses Development

In order to answer the research questions, this study applies the general framework of TpB along with moral norm in its examination of the factors that influence Malaysian investors' behaviour towards SRI. The examination includes the test on whether intention to invest in SRI could further improve explanations of investors' attitude, subjective norm, perceived behavioural control and moral norm towards investors' SRI decision – making behaviour.

2.5.1 The Determinants of Investors' Behaviour towards SRI

Recent findings on the application of TpB (Hofmann, Hoelzl & Kirchler 2008) reveal that the theory is able to predict investors' behaviour concerning SRI. However, the role of intention as a mediating variable of behaviour has yet to be addressed in any published SRI investors behavioural studies. TpB advocates that intention is the most influential predictor of behaviour as one does what one intends to do (East 1993; Rivis, Sheeran & Armitage 2009) . Behavioural intentions are motivational factors that strongly influence how willing people are to perform a behaviour (Ajzen, I 1991). In this study, investors were asked to rate their willingness to invest in funds/instruments that have been categorised as socially responsible. Investors' motivations concerning Shariah compliant funds/instruments were also tested as to elicit their opinions towards SRI and Islamic portfolios.

Ajzen (1991) argues that in order to act, a person must have a perceived behavioural control (PBC) on a subject, i.e. - availability of relevant resources and opportunities. In this study, the relevant resources include easy access and understanding to trade SRI products as well as investors' perceptions of the riskiness of SRI. Ajzen (1991) suggested that PBC is a measure of a respondent's perception of convenience to perform a given action if he/she so wishes. Ajzen (1991) argued that when behaviour requires less problems of control, intentions alone are sufficient to predict it. PBC designates a subjective degree of control over the performance of a behaviour and not the perceived likelihood that performing the behaviour will produce a given outcome (Ajzen, I 2002). Ajzen (2002) suggested that PBC should be read as perceived control over the performance of behaviour. The measure of PBC is based on control belief. In this study, control belief is measured by using the power (p) of a factor to assist the action. In other words it is easy to invest in SRI funds if I have the required access to

the funds and a control access measure (c), (i.e. - I can easily access to the necessary fund if I want to). Following the method of expectancy-value suggested by Ajzen (1991), the summated amount of control belief (∑cipi) should determine PBC. Therefore, in this study, PBC is investors' perceived ease or difficulty of engaging in SRI. PBC plays a dual role in TpB (Ajzen, I 1991; East 1993). First, together with attitude and subjective norm, it is a co-determinant of intention. Second, along with intention, it is a co-determinant of behaviour. Hence, it is argued that PBC is related not just to intention but also the individual respondent's actual behaviour. However, these arguments were not supported in a recent study on SRI's investors' behaviour as PBC was found to be insignificant in explaining behaviour (Hofmann, Hoelzl & Kirchler 2008). To provide further explanations on the determination of behaviour, with regard to SRI's investors' behaviour, this study expects that intention and PBC influence investors' behaviour. Therefore the study suggests the following hypotheses:

H1a: Investors' intention influences their behaviour towards SRI
H1b: Investors' perceived behavioural control influences their behaviour towards SRI

2.5.2 The Determinants of Investors' Intention towards SRI

In the TpB, intention is determined by attitude (Ab), subjective norm (SN) and PBC (Ajzen, I 1991). With regard to this study, Ab is defined as the investor's evaluation of objectives of investing in SRI funds. Using an understandable logic, investors' favourable attitudes are likely to stimulate SRI decisions. Ab has long been shown to influence behavioural intention (Ajzen, I, and Fishbein, M. 1980). Studies in this area (Williams 2007; Hofmann, Hoelzl & Kirchler 2008) have empirically supported the relationship. The determinants of Ab are the outcome belief which are the expected values arising from the action. Outcome belief is measured as a likelihood (b) of the outcome occurring if the action is taken, while the value is measured as an evaluation (e) of the outcome when it does occur. By using the expectancy-value method suggested by Ajzen (1991), the sum of the expected values (∑biei) determines Ab.

Following the TpB, SN suggests that behaviour is influenced by one's beliefs about whether significant others think one should engage in the behaviour. Significant others are individuals or groups whose preferences about a person's behaviour in this context are important to him or her. SN is assumed to assess the social pressures on individuals to perform or not perform a particular behaviour. The salient belief that determines SN encompasses normative beliefs, which refers to whether significant others think the respondents should or should not do the action in question. In this study, SN emulate investors' perceptions of whether investing in SRI funds are accepted, encouraged, and/or implemented by their circles of influence (i.e.; friend, relatives, financial advisers). Like the measurement of other belief factors, the normative belief is measured by the likelihood that significant others holds the belief (n), and the motivation to comply with the views of the significant others (m). Thus, the sum of normative belief (∑nimi) determines SN.Studies suggest a positive relationship between SN and intended behaviour. It has been empirically proven that SN influences behavioural intentions toward SRI (East 1993; Hofmann, Hoelzl & Kirchler 2008). By incorporating PBC along with Ab and SN in the determination of intention, the study thus further suggests:

H2: Investors' attitude, subjective norm, and perceived behavioural control influences their intention towards SRI

2.5.3 The Influence of Moral Norm on Intention and Behaviour towards SRI

Moral norms can be defined as an expression of one's personal standard towards an action, which differs from attitude. The former refers to an individual's personal standards of conduct whereas the latter simply involved estimates of the likelihood of particular outcomes of performing the behaviour (Godin, Conner & Sheeran 2005). A growing body of research has supported the role of moral norm as a predictor of intentions even when attitude, subjective norm and perceived behavioural control have been taken into account (Manstead 2000). Several studies (Godin, Conner & Sheeran 2005; Rivis, Sheeran & Armitage 2009) have concluded that moral norm should be tested along with the general framework of TpB. The empirical support for this claim has been elusive (East 1993; Godin, Conner & Sheeran 2005; Rivis, Sheeran & Armitage 2009). To date no research has been published that tested the idea that moral norms affect behaviour and/or by having intention as a mediator in predicting SRI investors decision – making behaviour. Therefore the study hypothesizes that:

H3a: Investors' moral norm influences their intention towards SRI
H3b: Investors' moral norm influences their behaviour towards SRI

2.5.4 The Role of Intention as a Mediator to Behaviour

Following Ajzen (1991), behaviour is a function of intention and PBC. Intention, on the other hand, is determined by Ab, SN and PBC. Therefore, it can be argued that intention serves as a mediator between Ab, SN, and PBC to behaviour. Previous studies that apply TpB to investment behaviour (East 1993), and SRI investors behaviour in particular (Hofmann, Hoelzl & Kirchler 2008), contend that the framework of TpB could explain investors' decision – making behaviour. However, both studies did not examine the role of intention as a mediator to behaviour. There is evidence to support that intention mediate the relationship between the antecedents of intention with behaviour (Shim et al. 2001). Therefore, together with moral norm, the study hypothesizes that:

H4: Investors' attitude, subjective norm, perceived behavioural control and moral norm influences their behaviour, mediated by their intention towards SRI.

3. Research Methodology and Hypothesis Development

3.1 Research Design

A quantitative approach is applied in this study where descriptive analysis was undertaken to provide an understanding of the sample and how this sample reveals various demographic and predictors of behaviour towards SRI in Malaysia. Figure 3.1 shows the operationalised extended TpB model, and it was measured by a sample survey of Malaysians' SRI decision – making behaviour.

3.2 The Variables

Issues of operational variables need to be considered before designing the data collection instruments (Davis 1993). Operationalizing was conducted by looking at the behavioural dimensions, facets, or properties denoted by the concept (Sekaran 2010). Since constructs that are relevant to this study such as attitude, subjective norm, perceived behavioural control, moral norm and intention cannot be precisely measured, operationalization is used to indirectly measure them. These are then translated into measurable elements so as to develop an index that measures the concept (Sekaran 2010). Following the TpB (Ajzen, I 1991) and what has been found in the literature (East 1993; Manstead 2000; Hofmann, Hoelzl & Kirchler 2008), this study asserts investors' behaviour (B) is a direct function of their behavioural intention (I), perceived behavioural control (PBC) and moral norm (MN) towards SRI. Investors' behavioural intention (I) is a function of four factors: investors' attitude (Ab), subjective norm (SN), perceived behavioural control (PBC) and moral norm (MN). Thus, the extended TpB model for this study can be described as follows:

$$B = w1I + w2PBC + w3MN$$
$$I = w4Ab + w5SN + w6PBC + w7MN$$

Each of the determinants of investors' intention, in this study, i.e. - attitude (Ab), subjective norm (SN), perceived behavioural control (PBC), and excluding moral norm (MN), is, in turn controlled by underlying belief factors (Ajzen, I 1991). These belief factors are referred as outcome beliefs (*biei*), normative beliefs (*nimi*) and control beliefs (*cipi*). They are related to attitude, subjective norm and perceived behavioural control, respectively. Theoretically, knowing one (i.e. - Ab) or the other (i.e.- *biei*) is not enough to explain the intention and behaviour relationship (Ajzen, I, Fishbein, M. 2008). These relationships are formulated based on the expectancy-value model which attaches a weight to each belief in a fashion similar to Vroom's (1969) expectancy theory (Taylor & Todd 1995). Thus, the equations for Ab, SN and PC, which include belief factors, are as follows:

Attitude	**→ Ab**	$= \sum bi\,ei$
Subjective Norm	**→ SN**	$= \sum ni\,mi$
Perceived Behavioural Control	**→ PBC**	$= \sum ci\,pi$

The measurement for the extended TpB model and hypotheses development for this study is discussed below.

3.3 Instrument, Measurement and Sampling

The instrument for the data collection was a structured questionnaire that incorporated the following: (a) information sheet about the study and five demographic questions preceding the scale; and (b) question matrices measuring the belief factors together with attitude, subjective norm, perceived behavioural control, moral norm, intention and behaviour after the scale. The instrument was administered to the purposive sampling technique, as solicited by an information sheet containing the description of the study. Respondents understood that their involvement in the study is voluntary and return of the anonymous questionnaire implied consent. The instrument is attached in Appendix A.

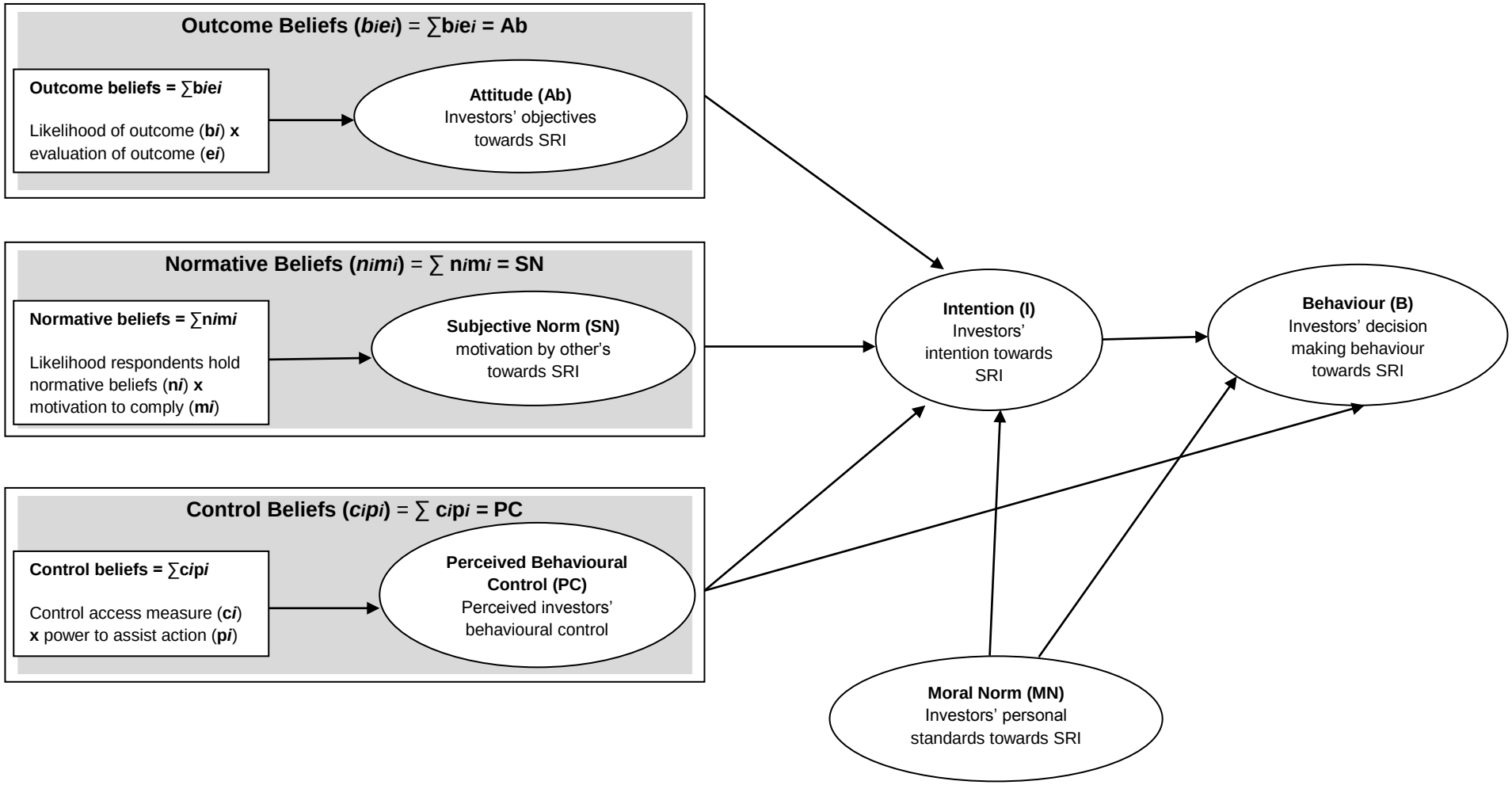


Figure 3.1: The extended TpB model

All measurements for the model are based on East's (1993) formulation. Following various recommendations (East 1993; Ajzen, I 2006; Ajzen, I, Fishbein, M. 2008; Hofmann, Hoelzl & Kirchler 2008), at least 2 items were used to measure attitude, subjective norm, perceived behavioural control, moral norm, intention and behaviour. Four – items were used to measure behavioural beliefs and three – items for normative and control beliefs. Multiple measures were used because they can reduce error and permit measurement of different facets of the concept (East 1993).

3.3.1 Scaling and Instrument Design

All responses to these items were based on a six-point Likert scale (i.e.- 1=highly disagree/unlikely/bad to 6=highly agree/likely/good). The scale checks investors' level of agreement with various statements about their investment decision – making towards SRI. Using Likert scales is recommended (East 1993; Ajzen, I 2006; Ajzen, I, Fishbein, M. 2008). Questions 1 through 5 referred to the demographic characteristics of the respondents, which provided a means for descriptive study as well as investor profiling. Questions 6 through 10 were statements measuring the investors' engagement in SRI which reflect their behaviour. Questions 11 through 13 were used to test whether investors' intentions will positively influence their behaviour towards SRI or otherwise. Question 14 had four sub-elements that were intended to measure investors' attitudes towards SRI. These measurements of attitude are tested again in question 19 through 22 and its sub-elements which were intended to measure behavioural beliefs and their effect on investors' attitude towards SRI. Questions 15 and 16 measured investors' subjective norm towards SRI. These measurements were contrasted in questions 23 through 25 together with their sub-elements which measured normative beliefs and their effects on investors' subjective norm towards SRI. Questions 17 and 18 measured the level of investors' perceived behavioural control on investment in SRI. These measurements were extended in questions 26 through 28, in order to assess the influence of control beliefs factors in investors' perceived behavioural control towards SRI. Finally, questions 29 through 31 measured the level of investors' own standards regarding their engagement in SRI. Details on the items used in the instrument are in Appendix A.

3.3.2 Sampling Design

The basic idea that guides this sampling design is to draw conclusions about all Malaysian investors' SRI behaviour by selecting some elements in a population as a unit of study. The reasons that have been considered for the sampling design include: (1) cost effectiveness, (2) higher results accuracy, (3) greater speed of data collection, and (4) availability of population elements (Cooper, 2008). The sampling design involves determining the target population subjects, method of sampling, and size of sample.

3.3.3 Sampling Method

Purposive sampling was used since this study sought high credibility of the results obtained as much as possible (Cooper 2008; Sekaran 2010). The sampling method was the most suitable as the study seeks responses from respondents who pose specific skills and knowledge who presumably representative of the SRI investors (Dillon, Madden & Firtle 1993; Saunders, Lewis & Thornhill 2009). The sample was drawn from the list of

fund managers and dealers' representatives who were registered in the Industry Transformation Initiative (ITI) courses organised by the Securities Industry Development Corporation (SIDC) of Malaysia. Attendance at these courses was made mandatory and regarded as one of the conditions for renewing the Capital Markets Services Representative's license (CMSRL) (SIDC, 2008). In order to minimise sampling bias, samples were drawn from the list of participants registered for ITI courses in various SIDC seminar centres nationwide, from 8th May 2010 until 13th June 2010. Only ITI courses where the target audiences were fund managers and dealers' representatives were selected. As the respondents were chosen only from selected ITI courses, the data collected cannot be considered to be statistically representative of the overall population of investors (Saunders, Lewis & Thornhill 2009). Any responses received not from the targeted subjects were considered to be individual investors.

3.3.4 Sample Size

The required sample size should include considerations of time and cost, heterogeneity or homogeneity of the population, as well as the kind of analysis engaged in by the study (Bryman, 2008). The subjects for the study were fund managers and dealers' representatives. These subjects can be considered as homogeneous in nature (Bryman, 2008). In the case of a homogeneous sample, a small number of samples are required so that there is less variation (Bryman, 2008).

The proposed data analysis method for this study is structural equation modelling (SEM), which is very sensitive to sample size and requires a reasonable number of samples to achieve adequate power to test the proposed hypotheses (MacCallum, 1996). In the literature, the rule of thumb on the minimum sample size are ranging from 5 cases per parameter (Bentler, 1987), and 15 to 20 cases per measured indicator (Mitchell, 1993; Hair, 2010). It has been recommended that the sample size is calculated based on the highest cases-per-variable ratio to minimise the chances of over – fitting the data (Hair, 2010). This is the criteria used in this study in determining the sample size.

3.4 Data Collection

Based on purposive sampling of 996 subjects who registered for ITI courses from 8th May 2010 until 13th June 2010 were selected. The samples were drawn based on the list of ITI courses where the target audiences were fund managers, dealers' representatives and others, such as financial planners, investment executives and foreign exchange brokers.

3.5 Data analysis

The data set for this study was analysed according to the principles and procedures of SEM. In SEM, several statistical techniques were combined to generate a set of relationships between one or more independent variables, either continuous or discrete, and one or more dependent variables that could be examined (Tabachnick 2007). The primary objective of using SEM is to explain the pattern of inter-related dependence relationships concurrently between a set of latent variables which are measured by one or more observed variables (Schumacker 1996; Hair 2010). To achieve these objectives, SEM integrates two widely used statistical methodologies: factor analysis and path

analysis. By using confirmatory factor analysis (CFA), SEM contributes to our understanding of the measurement model proposed in this study. SEM has the ability to examine the unidimensionality, reliability and validity of each individual construct (Anderson & Gerbing 1988; Kline 2004; Hair 2010). Additionally, it provides an overall test of model fit and individual parameter estimate tests simultaneously. Thus, when dealing with a structural model, CFA should be used with the incorporation of effect analysis techniques.

3.5.1 Measurement Model Assessments: Factor Analysis, Reliability and Validity Testing

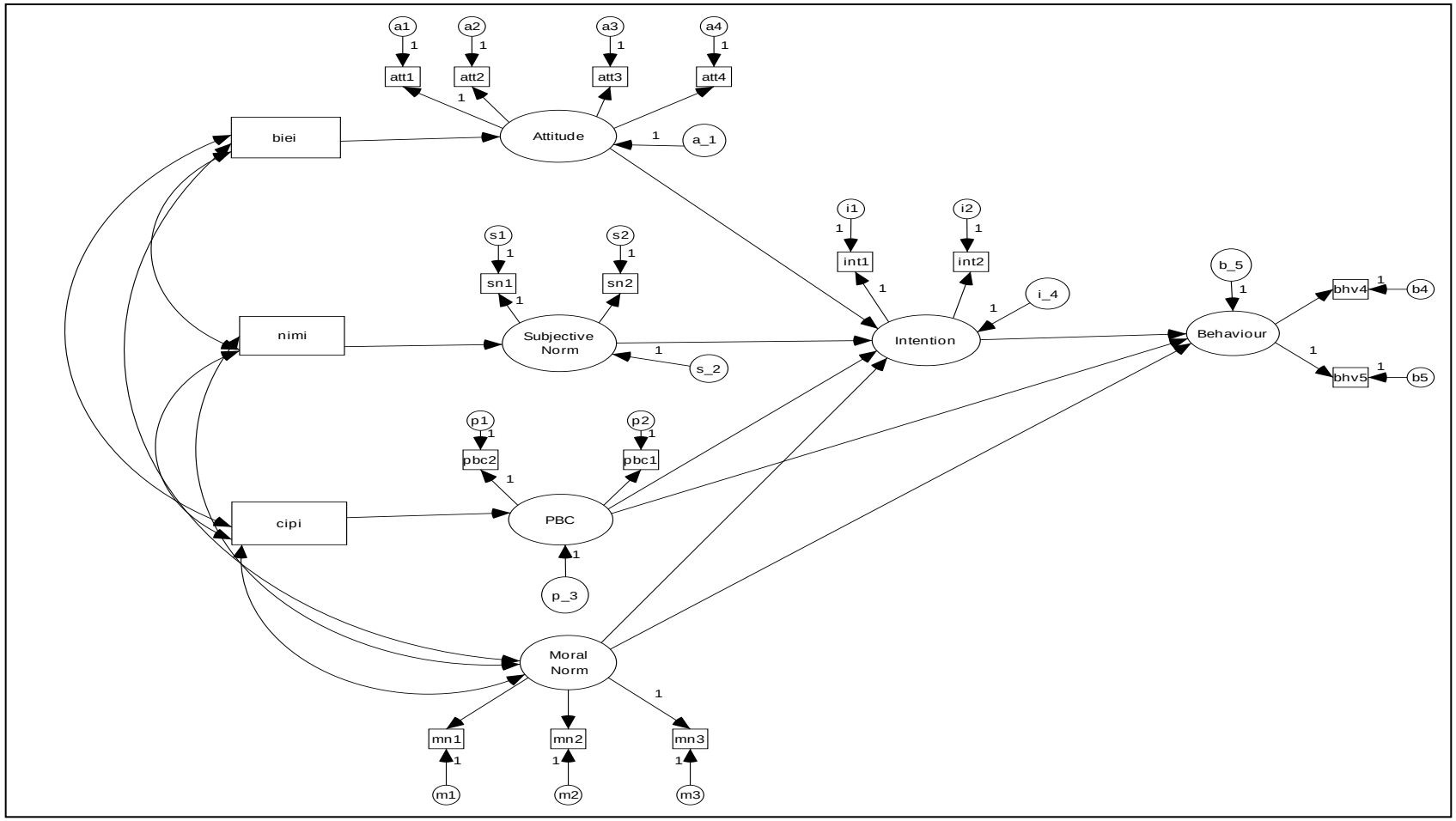
In this study, factor analysis was conducted in order to identify the underlying structure among the variables for the purpose of analysis. According to Hair (2010), there are two major methodologies required for factor analysis: an exploratory and a confirmatory perspective. Exploratory Factor Analysis (EFA) is an analysis tool that explores a set of variables to determine how and to what extent single variables are linked to particular underlying constructs. As it is exploratory in nature, the relationships between constructs do not have to be specified at the early stage of analysis. Confirmatory Factor Analysis (CFA) is commonly referred to as a way of analysing the measurement model testing theories specified a *priori* to describe the sample data. CFA is considered to be a tool of theory – testing by indicating how well the theoretical specification of the factors fit with the actual data (Hair 2010). Hence, CFA is considered for this study as it aims to use the TpB as a measurement theory to explain the engagement of Malaysian investors towards SRI.

In the CFA, factor loading and squared multiple correlations for each item in every factor were examined. To establish unidimensional scale, only measured items that have more than 0.7 loading and squared multiple correlations of more than 0.5 were included for further analysis here (Tabachnick 2007; Hair 2010). Once the initial step of unidimensionality of constructs was achieved, reliability and validity of these constructs were further assessed. To assess validity using CFA, the approach suggested by Fornell and Larcker (1981) was adopted. For this purpose, CFA using maximum likelihood estimate (MLE) was used (Kline 2004; Hair 2010). Average variance extraction (AVE) (Fornell & Larcker 1981) was used as a tool to determine the convergent validity, which then followed with construct reliability (CR) and discriminant validity test of the measured variables. CR of equal to or greater than 0.7, and AVE of more than 0.50 were adopted in this study (Tabachnick 2007; Hair 2010).

3.5.2 Structural Model Assessment: SEM

In the structural model, the relationship between the exogenous (attitude, subjective norm, perceived behavioural control and moral norm) and endogenous variables (intention and behaviour) were presented using a one-way effect relationship. By running AMOS, all parameters were estimated again. Those parameters included path coefficients between exogenous and endogenous variables, variances of the latent variables, loading coefficients, disturbance terms of the endogenous variables and error variances/covariances for the measured variables as depicted in Figure 3.2.

Figure 3.2: The path diagram of the study



Source: Processed data from 612 Malaysian investors

4 Data Analysis and Results

4.1 Data Screening: Testing of SEM Assumptions

Screening of the data set was conducted through an examination using SPSS descriptive analysis and frequency distributions. All data were found to be properly coded and entered.

4.1.1 Sample Size and Response Rate

From the 996 surveys distributed, a total of 713 surveys were received (71.6% response rate) of which twenty-nine cases were eliminated due to constant responses for all questions and therefore considered dubious and illogical. 104 cases (14.6%) were found to have missing responses and considered to have missing values (Sekaran 2010). The assessment of missing values using 5% cut-off criteria (Tabachnick 2007; Hair 2010) is discussed below.

4.1.2 Assessment of Missing Values

Following the recommendations of Hair (2010) and Tabachnick (2007), all respondents in the analysis who answered at least 95% (5% or less of missing values) of the survey questions were included in this study. Surveys with less than 95% responses are excluded and considered as having more than 5% missing values (Bryman 2008; Sekaran 2010). These cases were examined and a total of fifty-three cases removed as the responses were less than 95% (Tabachnick 2007). Fifty-one cases which have less than 5% of missing values were subjected to missing values treatment. Hence, there were 631 usable responses ready for analysis. The number of usable responses was considered sufficient as it was well above the recommended ratio of five to ten cases per observed variable (i.e. ; twenty-seven cases per observed variable) (Tabachnick 2007; Hair 2010). In order to accommodate the missing values for analysis, it was decided to substitute the missing responses with the variable mean responses. The mean substitution is recommended when the missing values is minimal, i.e.- 8%, as well as randomly distributed (Tabachnick 2007; Hair 2010). Apart from this method being widely used in academic research, it is also able to provide all cases with complete information (Hair 2010).

4.1.3 Assessment of Outliers

Following the missing values assessment, the data was subjected to outliers' examination. Sixty-three cases were identified as individual investors because they were neither fund managers nor dealers' representatives. These cases were retained as their responses are still valid to this study. Using SPSS descriptives, z-scores for each case were compared. No cases were found to have z-scores in excess of 3.29 ($p<.001$). Therefore, no univariate outliers were found based on z-score assessment (Tabachnick 2007). Multivariate assessment of outliers based on Mahalanobis distance (D^2) was conducted. Some individual (univariate) outliers may also become multivariate outliers when several variables are combined (Tabachnick 2007; Hair 2010). Furthermore, the D^2 measure has the statistical power that allow for significance testing (Hair 2010). The D^2 value divided by the number of independent variables (*df*), at significance levels of $p<0.001$ was compared (Kline 2004; Tabachnick 2007; Hair 2010). Following Hair

(2010), observations having a D^2/df value exceeding 3 to 4 can be considered as outliers. Hence, nineteen cases were identified as outliers and removed from the data set. As shown in Appendix C, the D^2 indicate no observations having D^2/df value exceeding 3 to 4. The removal of outliers resulted in 612 cases being kept for further analysis.

4.1.4 Assessment of Normality

In this study, both absolute and critical values for skewness and kurtosis were assessed for each variable. It was suggested that absolute values of univariate skewness indices greater than 3.0 indicate that a variable is extremely skewed (Bentler 1987). As for kurtosis, index value greater than 10.0 may suggest a problem while a value greater than 20.0 indicates a serious kurtosis problem (Kline 2004). Following Hair (2010), the critical value (c.r) is derived from a *z* distribution and most commonly used critical value are +/- 2.58 (.01 significance level). The assessment of normality for this study was using AMOS 17.0. As shown in Table 4.1, based on absolute value of skewness and kurtosis, it appears that all measures were within the range of +/-1.0. As such, it can be assumed that the data set is distributed normally (Bentler 1987; Schumacker 1996). However, an assessment based on critical values of skewness and kurtosis showed otherwise. All variables except belief factors were negatively skewed. Given the sample size for this study is more than 200 cases (i.e.; 612 cases), the deviation from skewness and kurtosis is negligible (Tabachnick 2007; Hair 2010).

The observed variables, then, were subjected to multivariate normality assessment based on the Mardia coefficient test (Tabachnick 2007; Byrne 2010; Hair 2010). Following Hair (2010), if a distribution of a variable is multivariate normal, it is also univariate normal. However, a univariate normal distribution will not guarantee a multivariate normal distribution. Based on Table 4.1, the Mardia coefficient of multivariate kurtosis indicated that the observed variables used to test the hypothesized model in this study did deviate from multivariate normality. In this study, the *z*-statistic of 59.079 is well above than the recommended value of +/-2.58 (Hair 2010). To moderate the effect of multivariate non-normality, the maximum likelihood (ML) estimation was applied in this study. The ML estimation is relatively robust against departures from multivariate non-normality (McDonald & Ho 2002; Kline 2004; Tabachnick 2007).

4.2 Descriptive Analysis: Sample Characteristics

Subsequent to data screening the data set had to be analysed. Table 4.2 shows the responses' means and standard deviation (SD) for the interval-scaled variables, which were grouped according to gender, age group, and profession. As shown in table 4.2, Most respondents were male (451) compared to female (161), representing a ratio of 73.7% and 26.3%, respectively. Therefore, the analysis of the survey results may predominantly represent opinions from the male investors but will not have a significant impact on the outcomes. In regard to age, most respondents were within the above 30 years old age bracket, representing 77% of the sample. It can be deduced here that most responses received from a more matured age group with a greater understanding on the issues in relation to SRI. The analysis of the final sample profile showed most responses came from dealers' representatives (473), followed by fund managers (77), and individuals (62).

Table 4.1: Assessment of Normality

Variable	skew	c.r	kurtosis	c.r
att1	-.363	-3.67	-.281	-1.417
att2	-.317	-3.206	-.229	-1.156
att3	-.184	-1.862	-.331	-1.671
att4	-.268	-2.709	-.387	-1.956
sn1	-.427	-4.317	-.313	-1.583
sn2	-.423	-4.27	-.292	-1.476
pbc1	-.486	-4.91	.08	.403
pbc2	-.383	-3.869	-.115	-.581
mn1	-.503	-5.084	.302	1.526
mn2	-.288	-2.911	-.582	-2.937
mn3	-.61	-6.165	.115	.581
biei	.161	1.631	-.245	-1.235
nimi	.387	3.906	.054	.272
cipi	.487	4.919	-.088	-.442
int1	-.617	-6.231	.123	.622
int2	-.62	-6.258	.244	1.234
int3	-.536	-5.413	-.164	-.826
bhv1	-.507	-5.122	.188	.95
bhv2	-.305	-3.078	-.881	-4.449
bhv3	-.467	-4.718	-.227	-1.146
bhv4	-.558	-5.634	.334	1.685
bhv5	-.575	-5.812	.398	2.012
Multivariate			**155.21**	**59.079**

Source: Processed data from 612 Malaysian investors ***Note***: **c.r** = critical ratio

The summary of descriptive results (Table 4.2) shows that the means value for all items measuring SRI behaviour are between 4 and 5. This indicates that respondents, generally agreed with the statements that describe their behaviour towards SRI. Female investors (4.23) are found to consider social responsibility aspects more than male investors (4.07) in making investment decisions. The variability of the two groups appears similar as reflected by their standard deviation (1.11 and 1.15 respectively).

Based on age group, investors who are in above 30 years old age bracket (4.11) are found to have higher agreement in describing their investments decisions based on social responsibility aspects, as compared to investors who are in group of less than 30 years old (4.06). The dispersion of responses from these groups appears comparable (1.18 and 1.09 respectively).

The mean values suggest that institutional investors (4.52), who are represented by fund managers in this study, appear to consider SRI more in making their investment decisions as compared to individual investors (4.23) and dealers' representative (4.15). No evidence is found to suggest that the dispersion of responses based on profession is different significantly (0.9, 1.17, and 1.15 respectively). Table 4.3 summarises the results of SRI decision – making behaviour pattern. From the total of 612 cases, more than half of the respondents (77.8%) agreed that they consider SRI when making investment decisions. Concerning SRI and Islamic investments, 62.5% agreed that they have invested in Islamic funds/shares and 450 respondents (73.6%) believed that SRI is consistent with Islamic investment principles. These responses are interesting as it would suggest that Islamic investment and SRI share the same principles. In terms of selection of funds/shares, 75.7% of the respondents agreed that they do consider the aspects of social responsibility. These responses are consistent with their engagement in SRI where 462 respondents (75.6%) indicated that investing with social responsibility in mind is something that they have done.

The results indicate that most respondents agreed on their engagement towards investing in SRI funds/shares. A high level of agreement on the principled consistency of SRI and Islamic investment would suggest that both products could be combined and lead to a larger market capitalisation. Further study needs to be done on examining to what extent SRI and Islamic investment are actually consistent. However, this is not the objective of this study. From the results presented above, it can be concluded that the overall majority of respondents are familiar with and literate in investing socially responsibly. The respondents have sufficient knowledge of SRI and were appropriate candidates to participate in this study.

4.3 Approaches to Data Analysis

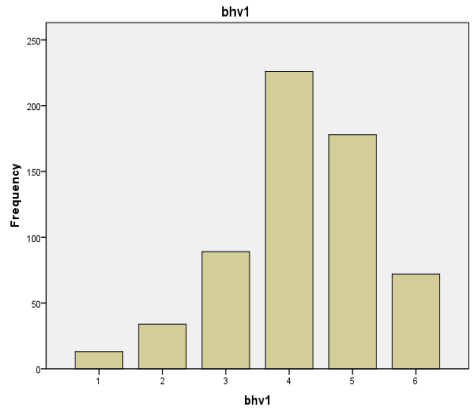
Data analysis was carried out in accordance with the two-step methodology recommended by Anderson and Gerbing (1988). In the first stage (measurement model), the analysis was conducted by specifying the causal relationship between the measured items (observed variables) and the underlying theoretical direct measure constructs (i.e.; attitude, subjective norm, perceived behavioural control, moral norm and intention). Confirmatory factor analysis using AMOS 7 was adopted for this purpose. Following this, the causal relationships between the underlying exogenous and endogenous constructs were specified in the second stage (structural model). Exogenous constructs included attitude (att), subjective norm (sn), perceived behavioural control (pbc) and moral norm (mn). While, endogenous constructs included intention and behaviour. Analysis and results concerning these two stages are discussed in more detail in the following section.

Table 4.2: Summary of descriptive analysis

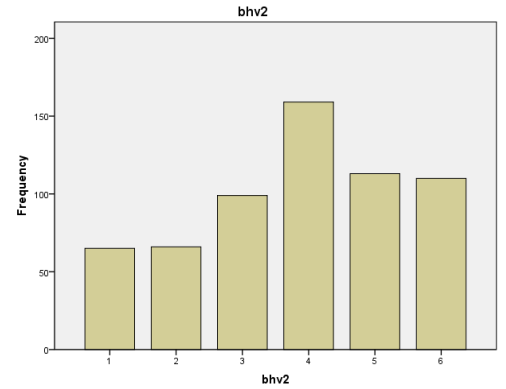
Measure	Gender				Age group				Profession					
	Male		Female		< 30		>30		Fund Managers		Dealers' Representatives		Individuals.	
SRI decision – making behaviour (bhv)	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
bhv1	4.18	1.14	4.29	1.12	4.22	1.04	4.2	1.16	4.52	0.9	4.15	1.15	4.23	1.17
bhv2	3.84	1.54	3.88	1.61	3.77	1.46	3.87	1.59	4.1	1.35	3.82	1.6	3.76	1.51
bhv3	4.22	1.23	4.24	1.34	4.2	1.29	4.23	1.25	4.26	1.12	4.19	1.3	4.45	1.17
bhv4	4.05	1.17	4.23	1.14	4.06	1.09	4.11	1.18	4.43	0.92	4.03	1.19	4.26	1.13
bhv5	4.07	1.15	4.19	1.11	3.98	1.11	4.14	1.15	4.36	0.96	4.05	1.16	4.16	1.18
Intention to invest in SRI funds/shares (int)														
int1	4.2	1.2	4.44	1.1	4.22	1.12	4.27	1.2	4.53	1.15	4.2	1.18	4.42	1.14
int2	4.29	1.17	4.49	1.05	4.29	1.11	4.35	1.15	4.73	1.15	4.26	1.14	4.47	1.08
int3	4.12	1.33	4.36	1.24	4.12	1.19	4.21	1.34	4.55	1.31	4.09	1.33	4.45	1.04
Attitude towards SRI funds/shares (att)														
att1	4.61	1.04	4.62	0.99	4.58	0.99	4.62	1.03	4.68	1.14	4.58	1.01	4.74	0.96
att2	4.55	1.01	4.51	0.92	4.52	0.95	4.54	1	4.69	1.07	4.5	0.97	4.62	0.98
att3	4.37	1.02	4.43	0.99	4.33	0.94	4.4	1.03	4.47	1.02	4.36	1.01	4.45	1.07
att4	4.47	1.03	4.5	0.91	4.48	0.94	4.48	1.01	4.54	1.06	4.45	0.99	4.65	0.96
Subjective norm towards SRI funds/shares (sn)														
sn1	3.88	1.3	3.93	1.26	3.79	1.19	3.92	1.31	4.1	1.38	3.85	1.28	3.92	1.14
sn2	3.85	1.25	3.93	1.26	3.79	1.15	3.89	1.28	4.03	1.35	3.84	1.26	3.94	1.1
Perceived behavioural control towards SRI funds/shares (pbc)														
pbc1	4.22	1.16	4.34	1.1	4.17	1.16	4.27	1.14	4.23	1.18	4.24	1.17	4.34	0.9
pbc2	4.14	1.18	4.19	1.16	4.1	1.19	4.17	1.17	4.22	1.12	4.12	1.19	4.29	1.06
Moral norm towards SRI funds/shares (mn)														
mn1	4.24	1.15	4.32	1.05	4.15	1.08	4.3	1.13	4.58	1.12	4.21	1.11	4.26	1.2
mn2	3.62	1.41	3.6	1.33	3.46	1.33	3.66	1.41	4.12	1.39	3.52	1.4	3.69	1.2
mn3	4.27	1.31	4.32	1.24	4.14	1.29	4.33	1.29	4.57	1.21	4.22	1.31	4.45	1.14
Frequency	451		161		141		471		77		473		62	

***Source*:** Processed data from 612 Malaysian investors; **Note: SD** = standard deviation; **1**=highly disagree/unlikely; **2**=quite disagree/unlikely; **3**=slightly disagree/unlikely; **4**=slightly agree/likely; **5**=quite agree/quite likely; **6**=highly agree/likely

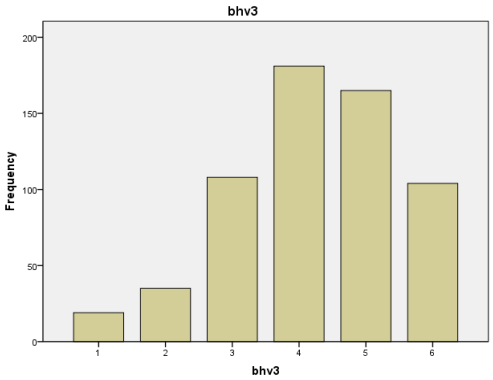
Table 4.3: SRI Behaviour Pattern



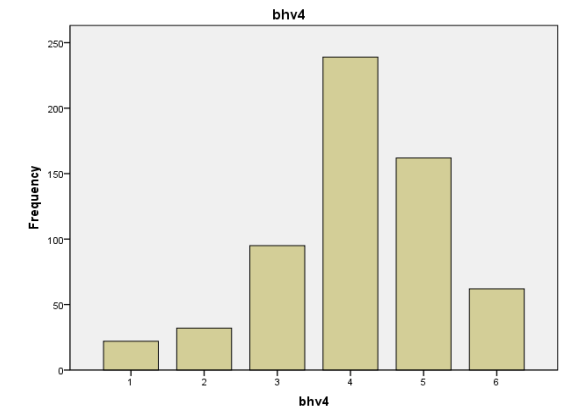
Measure	No. of respondents	%
bhv1: I consider SRI in making investment decisions		
1: highly disagree	13	2.1
2: quite disagree	34	5.6
3: slightly disagree	89	14.5
4: slightly agree	226	36.9
5: quite agree	178	29.1
6: highly agree	72	11.8



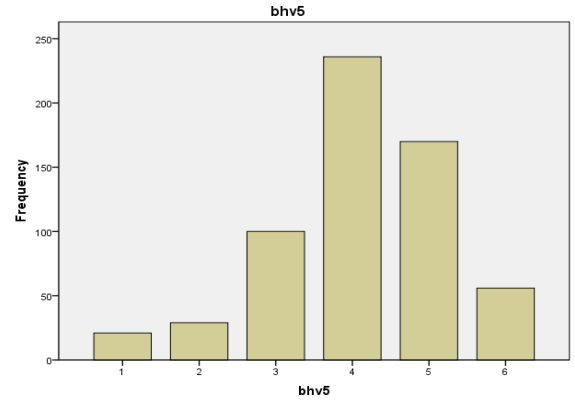
bhv2: Investing in funds/shares that comply with Sha'riah (Islamic law) is something that I have done		
1: highly disagree	65	10.6
2: quite disagree	66	10.8
3: slightly disagree	99	16.2
4: slightly agree	159	26.0
5: quite agree	113	18.5
6: highly agree	110	18.0



bhv3: I consider SRI to be consistent with principles of Islamic investment		
1: highly disagree	19	3.1
2: quite disagree	35	5.7
3: slightly disagree	108	17.6
4: slightly agree	181	29.6
5: quite agree	165	27.0
6: highly agree	104	17.0



Measure	No. of respondents	%
bhv4: I consider social responsibility aspects whenever I am choosing an investment fund/share		
1: highly disagree	22	3.6
2: quite disagree	32	5.2
3: slightly disagree	95	15.5
4: slightly agree	239	39.1
5: quite agree	162	26.5
6: highly agree	62	10.1



bhv5: Investing socially responsibly is something that I have done		
1: highly disagree	21	3.4
2: quite disagree	29	4.7
3: slightly disagree	100	16.3
4: slightly agree	236	38.6
5: quite agree	170	27.8
6: highly agree	56	9.2

Source: Processed data from 612 Malaysian investors

4.4 Assessments for the Measurement Model

The measurement model in this study specifies the pattern by which each observed variable is loaded onto a particular latent variable (Byrne 2010). As such, the measurement model aims to specify which item corresponds to each latent variable (Byrne 2010). Following Hair (2010), it was suggested to be good practice if the analysis for measurement model fit should be undertaken for the entire model instead for each construct. Hence, the assessments for specification of which observed variables affected the latent variable were done in the full model as depicted in Figure 4.1. Two assessments were involved; 1) factor loading for measured items; and 2) reliability and validity testing of each factor.

4.5 Confirmatory Factor Analysis (CFA)

The assessment of factor loadings for measured items, reliability and validity of the factors was established with confirmatory factor analysis employing AMOS. Confirmatory factor analysis (CFA) was used because exploratory factor analysis (EFA) can only offer preliminary analyses without an adequate theoretical base. As such, assessment on unidimensionality for the hypothesised model cannot be attained (Anderson & Gerbing 1988). The CFA approach has overcome the limitation of EFA by allowing the observed variables (measured items) to be grouped in latent variable (factor) on the basis of theories; 1) which pairs of common factors are correlated; 2) which observed variables are affected by which factors; 3) which observed variables are affected by an error term factor, and; and 4) which pairs of error terms are correlated

(Lu, Lai & Cheng 2007). Subsequently, a statistical test can be done in order to determine whether the data confirmed the theoretical model (Chin, WW 1998).

4.5.1 Factor Loadings

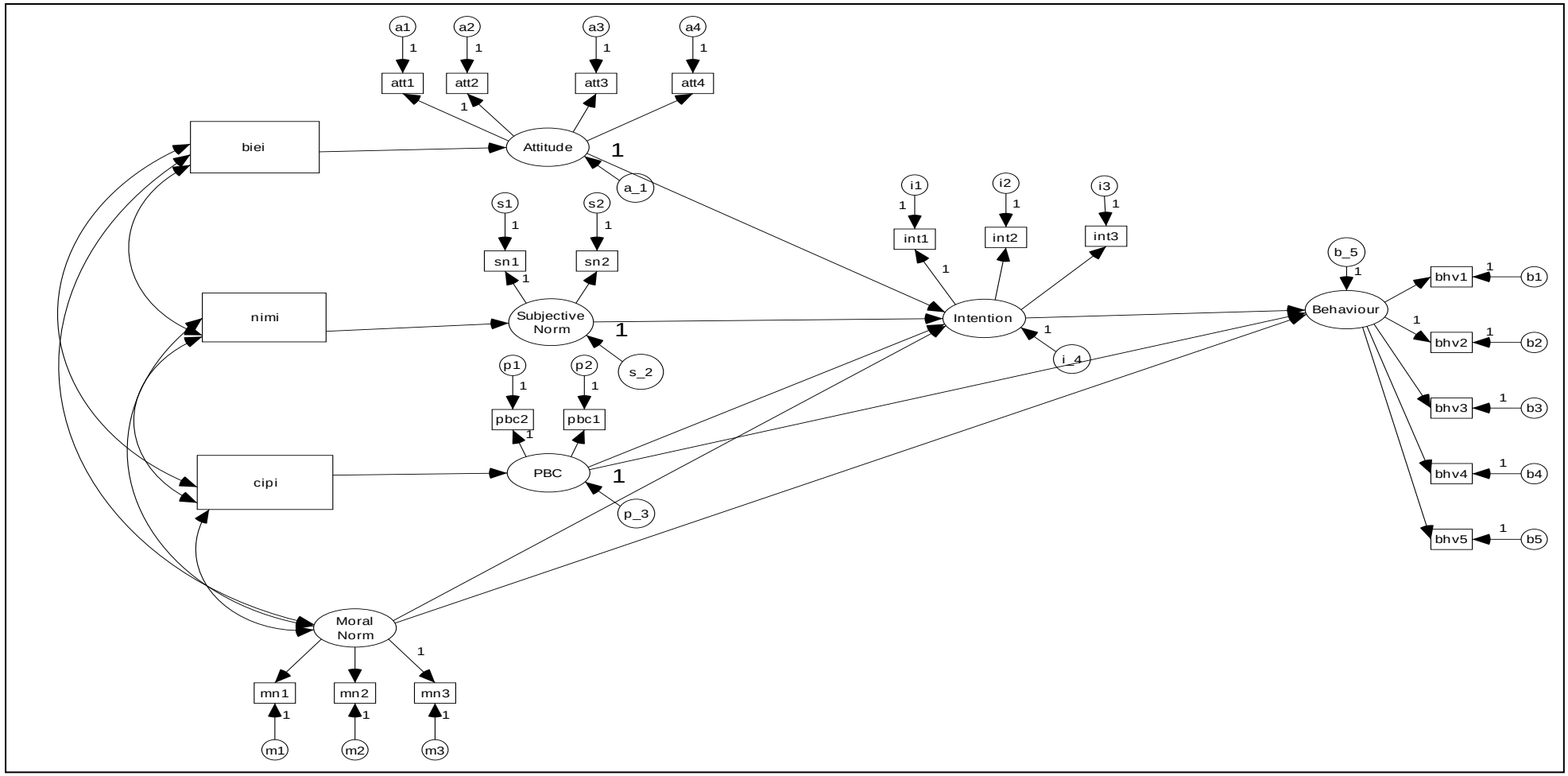
Based on Figure 4.1, only observed variables which have a standardised confirmatory factor loadings (standardised regression weight) of more than 0.70 ($p < 0.001$) were included for further analysis (Chin, WW 1998; Tabachnick 2007; Hair 2010). All 6 factors were tested simultaneously in a single CFA measurement model. In this model, each observed variable was only allowed to load on one factor and cannot cross-load on other factor. Table 4.4 show the details on the observed variables that were included as well as excluded for further analysis based on their factor loadings. All belief measures were composed with the evaluative component using the expectancy-value method suggested in the TpB (i.e.; $\sum biei=b1e1+b2e2+b3e3+b4e4$) (Ajzen, I 1991; Ajzen, I, Fishbein, M. 2008). The belief factors (indirect measures) were not included in the reliability and validity assessments because they were presented as a single composite observed variable to direct measures (i.e.-attitude, subjective norm, and perceived behavioural control). Therefore, the reliability and validity of these indirect measures were only based on their correlation with the respective direct measures. Two items in the outcome beliefs were dropped as to increase its correlation with attitude. No items in other indirect measures are dropped as its correlate highly with the direct measures. Additionally, the significance of these indirect measures were tested in the full structural model (stage 2).

4.5.2 Tests of Reliability and Validity

Following Hair (2010), the tests of reliability and validity for the underlying constructs were based on individual items' reliability, construct reliability (CR), average variance extracted (AVE) and discriminant validity. The AVE was calculated as the total of squared multiple correlations ($\boldsymbol{R^2}$) divided by the number of items in each constructs (Hair 2010). Hence, AVE represents the average of SMS or average communality. To suggest a construct that satisfies the requirement of convergent validity, an AVE should be 0.50 or higher (Fornell & Larcker 1981; Hair 2010). The CR was calculated from the squared sum of factor loadings for each construct and the sum of the error variance terms for a construct (Hair 2010). The measure for CR is analogous to the commonly-used Cronbach's alpha (Taylor & Todd 1995; Hair 2010) except that it is also considered the actual factor loadings rather than assuming that each item is equally weighted in the composite load determination (Lin 2004). By convention, CR estimate equal or higher than 0.70 suggests good reliability and indicates that internal consistency exists (Fornell & Larcker 1981; Hair 2010). Table 4.4 indicates good reliability in individual items based on $\boldsymbol{R^2}$ values for all measures were greater than 0.50. In terms of CR, the measures of all constructs exceeded the requirement of 0.70 which suggests that all measures are consistently representing the same latent constructs. In addition, reliability assessment based on AVE reveals that all constructs exceeded 0.50. This implies that the variance captured by the individual construct was greater than the variance accounted for by measurement error (Fornell & Larcker 1981; Hair 2010).

To provide more support to validity testing, the constructs were then subjected to discriminant validity. The discriminant validity was assessed based on correlations

Figure 4.1: The CFA measurement model



Source: Processed data from 612 Malaysian investors

Table 4.4: CFA results for the measurement model

Measure	Factor Loading	R^2	AVE	CR
Variables included:				
Behaviour			***0.786***	***0.88***
Consider social responsibility (*bhv4*)	0.887	0.787		
Invested socially responsibly (*bhv5*)	0.886	0.784		
Intention			***0.861***	***0.925***
Intent to invest in SRI (*int1*)	0.926	0.858		
Try to invest in SRI (*int2*)	0.93	0.865		
Attitude			***0.813***	***0.946***
Bad/good (*att1*)	0.921	0.848		
Nasty/nice (*att2*)	0.922	0.849		
Punish/reward (*att3*)	0.857	0.734		
Unpleasant/pleasant (*att4*)	0.905	0.819		
Subjective Norm			***0.887***	***0.94***
Important people (*sn1*)	0.941	0.885		
Influential people (*sn2*)	0.943	0.888		
Perceived Behavioural Control			***0.822***	***0.902***
Easy to invest in SRI (*pbc1*)	0.893	0.797		
Plenty opportunity to invest in SRI (*pbc2*)	0.92	0.846		
Moral Norm			***0.602***	***0.819***
Personal principles (*mn1*)	0.804	0.646		
Guilty conscious (*mn2*)	0.715	0.511		
SRI is good (*mn3*)	0.806	0.649		
Variables excluded:				
Behaviour				
Consider SRI (*bhv1*)	0.615			
Invested Sha'riah shares (*bhv2*)	0.472			
SRI consistent with Sha'riah (*bhv3*)	0.518			
Intention				
Plan to invest in SRI (*int3*)	0.681			

Source: Processed data from 612 Malaysian investors ***Note***: **Factor Loading** = Standardised Regression Weight; **R^2** = Squared multiple correlation; **AVE** = average variance extracted; **CR** = construct reliability

between constructs and square root of AVE. It has been suggested that the cut-off point for correlations between constructs should not be higher than 0.85 (Kline 2004; Yousafzai, Foxall & Pallister 2010). Following Hair (2010), the squared root of AVE should also be higher than the inter-construct correlation and no correlation among the latent variables exceeded 0.9 as to suggest discriminant validity. Table 4.5 suggests that the correlation coefficients among the latent constructs did not exceed 0.8, therefore the model is assumed to be free from multicollinearity problems (Tabachnick 2007; Hair 2010). In addition, comparison between the square root of AVE and inter-construct correlation also established discriminant validity. From the tests of reliability and

validity, strong evidence was found to suggest that the constructs satisfied the requirement for their reliability, convergence and discriminant validity.

Table 4.5: Inter-construct correlation matrix and square root of AVE

Construct	1	2	3	4	5	6
Attitude	***0.902***					
Subjective Norm	0.624	***0.942***				
Perceived Behavioural Control	0.428	0.412	***0.917***			
Moral Norm	0.628	0.63	0.45	***0.776***		
Intention	0.632	0.595	0.326	0.547	***0.928***	
Behaviour	0.506	0.486	0.314	0.544	0.689	***0.887***

Source: Processed data from 612 Malaysian investors; ***Note***: Square root of AVE = figures in shaded area

4.6 Results for structural model test: SEM

Following the satisfactory results for reliability and validity with reference to the constructs in the measurement model, the structural relationships between exogenous and endogenous variables were estimated based on structural equation modelling (SEM). The structural model included: a) paths from the TpB components and moral norm to intention and decision – making behaviour; and b) correlations among the TpB predictors and moral norm. As presented in Table 4.6, these hypotheses were presented in six causal paths (H1a, H1b, H3a, H3b, and H4) to determine the relationships between the constructs under considerations.

Table 4.6: Underlying hypotheses of the study

Hypotheses No.	Hypotheses
H1a: intention → behaviour	Investors' intention influences their behaviour towards SRI
H1b: perceived behavioural control → behaviour	Investors' perceived behavioural control influences their behaviour towards SRI
H2: attitude, subjective norm, perceived behavioural control → intention	Investors' attitude, subjective norm, and perceived behavioural control influences their intention towards SRI
H3a: moral norm → intention	Investors' moral norm influences their intention towards SRI
H3b: moral norm → behaviour	Investors' moral norm influences their behaviour towards SRI
H4: attitude, subjective norm, perceived behavioural control, moral norm → intention → behaviour	Investors' attitude, subjective norm, perceived behavioural control, and moral norm influences their behaviour, mediated by their intention towards SRI

The structural model was assessed in three ways. First, the proposed extended theoretical model should meet the goodness-of-fit to the empirical data. Second, the directions, significance and magnitude of the paths corresponding to the proposed hypotheses of the model were examined. Third and finally, the squared multiple correlations were examined to determine the proportion of variance that was explained by the exogenous variables in the hypothesised model.

4.6.1 Assessment of the structural model fit and unidimensionality

The hypothesised model was tested for goodness-of-fit using AMOS 17. Based on the two-index rules presentation strategy, RMSEA should be or less than 0.07 when CFI is larger than 0.92 (Hair 2010), and SRMR close to 0.09 when TLI is larger than 0.95 (Hu & Bentler 1999) are required to support that there is a relatively good fit between the hypothesised model and the observed data. Table 4.7 suggests that based on RMSEA and SRMR the model was not found to achieve adequate fit to the observed data. The chi-square was also reported to be significant. The hypothesised model could be accepted as providing a good fit even though the chi-square value is statistically significant (Anderson & Gerbing 1988), especially with a large sample (Bagozzi & Yi 1988; Hair 2010).

The modification indices from the AMOS output indicated that a path from subjective norm to attitude (M.I=101.21, Par change=0.293) should be added to improve the model's fit. The path was added because studies have justified that attitude is indeed not independent and influenced by subjective norm (Miniard & Cohen 1981; Vallerand et al. 1992; Man Kit 1998; Hansen 2005). The modified measurement model fit the data well (RMSEA=0.06, CFI=0.97, SRMR=0.087, TLI=0.962) with a significant decrease in chi-square value (Δ cmin = 150.195). Additionally, the AIC indicates that the modified model has a smaller number of AIC and suggests that it is more parsimony and a better-fitting model. Hence, the modified model is proposed as a structural model for analysis. Given that all the goodness-of-fit indices indicate good fit, the constructs met the requirement for reliability and validity plus all factor loading for observed variables above 0.70 (p <0.001). Thus the proposed structural model satisfy the conditions of unidimensionality.

Table 4.7: Summary of Goodness-of-fit Statistics

	Cut-off Criteria	Measurement Model	Structural Model
Chi-square (**cmin**)		536.29 (p = .000)	386.095 (p = .000)
Degress of freedom (**df**)		122	121
Normed chi-square (**cmin/df**)	**2.0 – 5.0** (Schumacker 1996; Hair 2010)	4.396	3.191
Root mean square error of approximation (**RMSEA**)	**<0.07** (with CFI>0.92) (Hair 2010)	0.075	0.06
Comparative fit index (**CFI**)	**> 0.92** (Hair 2010)	0.954	0.97
Tucker-Lewis index (**TLI**)	**>0.95** (Hu & Bentler 1999)	0.942	0.962
Standardised root mean square residual (**SRMR**)	**<0.09** (with TLI >0.95) (Hu & Bentler 1999)	0.137	0.087
Akaike Information Criterion (**AIC**)		634.294	486.095

Source: Processed data from 612 Malaysian investors

4.6.2 Assessment of the path coefficients

Once the model fit was considered acceptable with the modified structural model, the path coefficients (**γ's** and **β**) were then examined. Table 4.8 lists all the standardised

path coefficients estimated in the structural model together with their critical ratio (C.R). C.R The result suggests that attitude (γ=.38), and subjective norm (γ=.28) had significant impacts (p<.001) on intention. Thus, investors' positive objectives as well as social influence do influence their motivation to invest in SRI funds. Moral norm seems to have a significant impact on both intention (γ=.16) and behaviour (γ=.24). This indicates that investors' personal standards did not just influence their intention but also on their SRI investment behaviour. However, no evidence was found to suggest that perceived behavioural control had a significant impact on intention and behaviour. This would suggest that convenience to invest in SRI funds do not have a significant influence on investors' SRI decision – making behaviour. The path coefficient from intention to behaviour was found to be positive, and significant at the .001 level (**β**=.56). All belief factors were validated to have positive and significant relationships (p<.001) to the direct measures (attitude, subjective norm and perceived behavioural control) as suggested by the theory.

Table 4.8: Path coefficients in the structural model

Hypotheses No.	Path	Coefficient	*z*-value	*P*
	nimi → Subjective Norm (SN)	.665	20.084	***
	biei → Attitude (Att)	.292	7.919	***
	cipi → perceived behavioural control (PBC)	.534	13.837	***
	SN → Att	.493	12.631	***
H2	Att → Intention (Int)	.38	8.088	***
H2	SN → Int	.276	5.723	***
H2	PBC → Int	-.008	-0.211	0.833
H3a	Moral Norm (MN) → Int	.16	3.247	***
H1b	PBC → Behaviour (Bhv)	.029	0.747	0.455
H3b	MN → Bhv	.24	5.061	***
H1a	Int → Bhv	.56	13.087	***

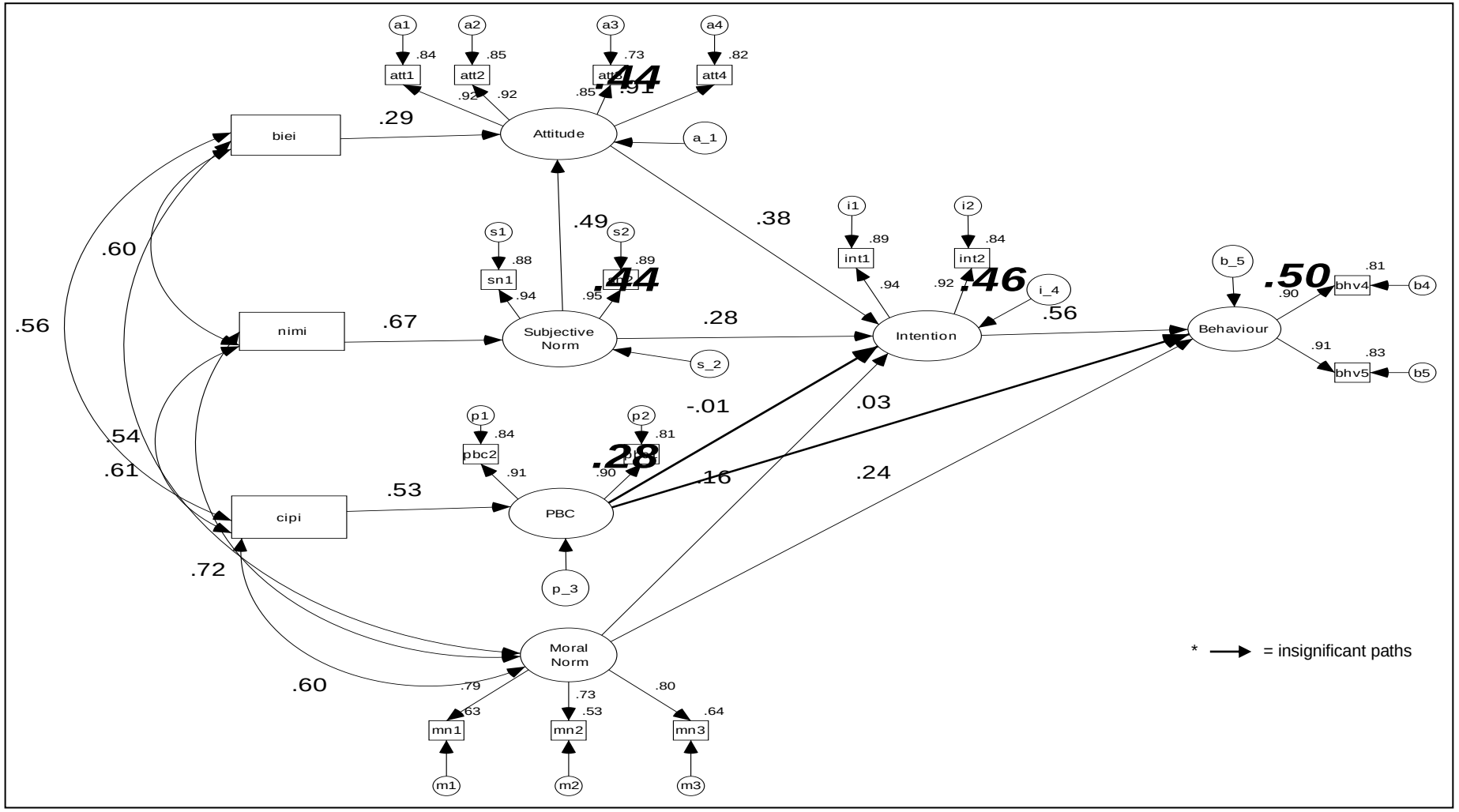
Source: Processed data from 612 Malaysian investors
Note: *** p<.001;

4.7 Effect Analysis

One advantage of employing SEM is its ability to estimate structural relations among the proposed latent variables simultaneously. The structural relations include the direct effects from exogenous variables to endogenous variable and indirect effects from exogenous/endogenous variables to endogenous variables by mediating endogenous variables. Figure 4.2 show the path diagram and the direct effects are shown as path coefficients. To obtain an overall view of these effects on latent variables being studied, it was necessary to conduct an effect analysis, where direct effects, indirect effects and total effects are considered.

In the proposed (modified) structural model, attitude was the mediating variable between subjective norm and intention to behaviour. Intention was also the mediating variable between attitude, subjective norm, perceived behavioural control and moral norm to behaviour. Therefore, indirect effects existed between attitude, subjective

Figure 4.2: The proposed structural model with estimated standardised path coefficients



Source: Processed data from 612 Malaysian investors

norm, perceived behavioural control and moral norm to behaviour. Theoretically, perceived behavioural control and moral norm may have direct and indirect effects on behaviour. These relationships were tested and the total effects were exactly the same as the direct effects, as were relationships between the perceived behavioural control and moral norm to behaviour. The direct effects between belief factors (indirect measures) and direct measures (attitude, subjective norm and perceived behavioural control) were also analysed. By employing AMOS, indirect and total effects were computed in the final model. All effects are shown in Table 4.9 together with the squared multiple correlations (R^2) associated with intention and behaviour. All effects were statistically significant ($p<.001$) except effects relating to perceived behavioural control.

Guidelines recommended by Cohen (1988) were followed in interpreting the magnitude of effects found in the structural model. Standardised path coefficients with absolute values less than .10 may indicate a small effect, values around .30 a medium effect, and values of .50 or more a large effect (Cohen 1988). Most of the significant path coefficients were around .16 to .38, indicating medium – sized effects. However, path coefficients from subjective norm to attitude (.49) and that from intention to behaviour (.56) were much higher, both suggesting large effects in their absolute values.

Table 4.9: Standardised effects and SMCs (R^2) of the proposed structural model

Relations	Direct Effect	Indirect Effect	Total Effect
Intention **(R^2 = .46)**			
Attitude	0.38		0.38
Subjective Norm	0.28	0.19	0.47
Perceived Behavioural Control	-0.01*		-0.01*
Moral Norm	0.16		0.16
Behaviour **(R^2 = .50)**			
Intention	0.56		0.56
Attitude	-0.02*	0.21	0.21
Subjective Norm	0.04*	0.26	0.26
Perceived Behavioural Control	0.03*	-0.006*	0.025*
Moral Norm	0.24	0.09	0.33

Source: Processed data from 612 Malaysian investors; ***Note***: * non-significant causal relationship ($p>.1$)

The pattern of causal relationships is partly consistent with that predicted by the theory. In predicting behaviour, intention (.56) contributes the most as compared to other latent variables. In predicting intention, attitude (.38) has the highest direct effects. These findings are consistent with other studies on attitude and intention. Attitude has the largest direct effect (0.38) on intention, indicating investors' intention to invest in SRI is largely influenced by their attitude to the subject. No evidence was found to suggest that perceived behavioural control has a causal relationship with both intention and behaviour. Moral norm was found to have a medium effect on both intention (.16) and behaviour (.24) and statistically significant ($p<.001$). All belief factors (outcome belief, normative belief and control belief) were found to have a medium to large positive effect on attitude, subjective norm, and perceived behavioural control.

Apart from path coefficients, squared multiple correlations (R^2) were also used as an indicator showing the integrated effect size for predicted endogenous variables. R^2 values of .01, .09, and .25 could be used as an evidence of small, medium, and large effects respectively (Cohen 1988). The R^2 of intention and behaviour were .46 and .50 respectively. This indicates that the structural relationships for attitude, subjective norm and moral norm to intention in the proposed structural model explain 46% of the total variation in intention. Attitude, subjective norm and moral norm, with the mediating role of intention plus with a direct effect of moral norm to behaviour explained 50% of the total variation in behaviour. Based on the R^2, it can be deduced that the proposed structural model had a robust statistical ability in explaining the intention and behaviour of Malaysian investors towards SRI.

4.8 Hypotheses Testing Results

Hypothesis 1a posited that investors' intention to invest in SRI influences their decision – making behaviour. The hypothesis was tested by studying the causal relationship of intention to behaviour (intention → behaviour). As reported earlier, path coefficients from intention to behaviour (β=.56) were positive and significant (p<.001), thus supporting the hypothesis. Hypothesis 1b posited that investors' perceived behavioural control to invest in SRI influences their decision – making behaviour on SRI. The hypothesis was tested by studying the causal relationship of perceived behavioural control to behaviour (perceived behavioural control → behaviour). Path coefficients from perceived behavioural control to behaviour (β=0.03) were positive and but not significant (p=0.455), thus the hypothesis is not supported.

In hypothesis 2, investors' attitude, subjective norm, and perceived behavioural control were posited to influence their intention towards SRI. The hypothesis was tested by examining the direct effects of attitude, subjective norm, and perceived behavioural control on investors' intention to invest in SRI (attitude, subjective norm, and perceived behavioural control → intention). Based on path coefficients, only attitude (γ=0.38) and subjective norm (γ=.28) were positive correlated to intention and statistically significant (p<0.001). The path coefficient of perceived behavioural control (γ=-0.01) suggested that it was not a factor that caused intention and was statistically insignificant (p=0.833). Thus, hypothesis 2 is not supported as only attitude and subjective norm were found to have a causal relationship with intention.

Hypothesis 3a posited that investors' moral norm influences their intention towards SRI. The hypothesis was assessed based on the direct effect of moral norm on intention (moral norm → intention) to invest. In hypothesis 3b, it was assumed that investors' moral norm influence investors' behaviour towards SRI. The path coefficient of moral norm to intention (0.16), and moral to behaviour (0.24) indicate that moral norm has a medium effect on both intention and behaviour and is statistically significant (p<0.001). Hence, hypothesis 3a and 3b are supported in this study.

Hypothesis 4 dealt with the role of intention as a mediator of attitude, subjective norm, perceived behavioural control, and moral norm to investors' behaviour towards SRI. As summarised in Table 4.7, it was found that the direct effect of attitude (β=-0.02) and subjective norm (β=0.04) on behaviour were extremely low and insignificant (p>0.1). The relationship of attitude and subjective norm to behaviour was found to be improved and statistically significant (p<0.001) with intention as a mediator. No evidence was

found to suggest that perceived behavioural control has a significant causal relationship to behaviour, even with intention as a mediator. The relationship between moral norm and behaviour was found to be improved with the existence of intention as a mediator which indicates by the total effect figure (0.33). Hence, hypothesis 4 is not supported in this study.

From the result, intention was found to be an insignificant mediator to behaviour. This was contributed by perceived behavioural control which was statistically insignificant. However, the relationship of attitude, subjective norm and moral norm with behaviour was improved significantly with intention as a mediator. Thus, the role of intention as a mediator can only be confirmed with a separate analysis for each variable. At this point, attention should be directed to the relationship of subjective norm and attitude. Subjective norm was found to have a larger direct effect on attitude in comparison to its effect on intention. Although this relationship was not hypothesised in this study, and suggested based on a modification index from AMOS, it can be argued that subjective norm influences intention and attitude This finding was substantiated and found to be consistent with past studies (Man Kit 1998; Hansen 2005).

5 Discussion and Conclusions

This study hypothesised that investors' decision – making behaviour concerning SRI is influenced by intention, perceived behavioural control, and moral norm. In this study, apart from perceived behavioural control and moral norm, the influence of intention on behaviour are tested in two ways; 1) intention as a predictor to behaviour, and 2) intention as a mediator between attitude, subjective norm, perceived behavioural control, and moral norm to behaviour. Therefore, hypotheses H1a, H1b and H4 are proposed, representing the influence of intention and perceived behavioural control on behaviour, and intention as a mediator of behaviour. It is the objective of this study to explore the influence of moral norm as an extended variable to the intention-behaviour relationship in the TpB. There is growing empirical evidence to support the contention that moral norm contributes significantly to the understanding of intention. Following past studies, it was assumed here that an understanding of the relationship between investor's intention and behaviour in regard to SRI could be further improved by including moral norm. Thus, hypothesis H3 is proposed. Discussions of results concerning these hypotheses are outlined next.

This study shows that in the context of SRI in Malaysia, behaviour is significantly influenced by intention ($p<.001$), but not with perceived behavioural control. Perceived behaviour control is found to be insignificant ($p>.1$) to both behaviour and intention. It is found here that intention alone is sufficient to predict behaviour. This suggests that, Malaysian investors have complete control over their decisions on SRI due to the availability of opportunities (i.e.; SRI funds/shares) and resources, such as relevant information on SRI trading and risks. Thus, their decision – making behaviour concerning SRI is mainly influenced by their motivation to invest which is measured by intention.

To address the second research question of the study, hypothesis H4 is proposed. In this study, apart from examining the relationship of core constructs of the TpB (attitude, subjective norm, and perceived behavioural control) to behaviour, the moral norm is also included as a proposed constructs to extend the TpB. The effect analysis results

demonstrate that, the relationship of attitude, subjective norm, and moral norm to behaviour is better explained with intention as a mediator. No evidence is found to suggest that attitude, subjective norm, and perceived behavioural control have a direct influence on behaviour. Apart from intention, moral norm is also found to have a significant influence ($p<.001$) on behaviour.

The results of this study demonstrate that moral norm construct is significant in explaining the investor's intention and behaviour towards SRI. More specifically, these results demonstrate that investor's motivation (as measured by intention) to invest in SRI and their actual engagement are significantly influenced ($p<.001$) by investor's own personal standards. This study improves past findings by applying moral norm measurements in a real market setting. No evidence is found to support findings that suggest moral norm is not a significant factor to investment decisions. The results here confirm that moral norm can contributes significantly to the understanding of intention and behaviour relationship. Given this significance, it is assumed that the results of this study provide support to an extension to TpB.

In the second hypothesis, this study examines the influence of investors' attitude, subjective norm, and perceived behavioural control on the intention to invest in SRI. The results show that only attitude and subjective norm are significantly influence intention to invest in SRI. The result demonstrates that attitude is the most important predictor of intention to invest. Therefore, this study supports the claim that TpB is able to explain investors' decision – making behaviour concerning SRI. Perceived behavioural control is found to be insignificantly influence intention ($p>.1$). An important finding of this study is the significant relationship between subjective norm and attitude ($p<.001$).

The finding shows that there is a significant direct relationship between subjective norm and attitude. The addition of the causal path from subjective norm to attitude improves the model fit and the path coefficient for this path is highly significant ($\gamma=.49$, $p<.001$). This result is consistent with past findings on morality – related behavioural studies that used structural equation modelling to test the attitude and subjective norm. The significant causal path from subjective norm to attitude suggests that investors' favourable or unfavourable attitude towards SRI investment instruments, is affected by how important referents to investors (i.e.; friends, relatives and financial advisors) consider SRI. In the context of this study, it can be argued that Malaysian investors are motivated to conform to social norms. Therefore, their attitudes towards intention to investment in SRI instruments tend to be socially-determined rather than individually-determined.

This study shows that Malaysian investors' intention to invest in SRI instruments are significantly influenced by their belief about risk and return outcomes. However, beliefs related to feelings of control, such as easy access to funds and understanding on SRI trading, do not seem to constitute the major contributor to Malaysian investors' decision – making behaviour regarding SRI instruments. It is reasonable to believe that investors' outcome beliefs are formed with the influence of people who are important to investors, especially when the issues are related to moral, social and financial. Therefore, it can be suggested here that the investors' decisions concerning SRI are not just based on financial justification alone, but also influenced by perceptions from investors' social networks.

5.3 Implications of the study

This study focused on the behavioural dimensions of Malaysian investors in the financial sector by examining their decision behaviours in relation to SRI instruments. The findings of this study offer valuable additional debates on the theory and possible policy implications for stakeholders (i.e.; SRI providers, regulatory bodies, government) to improve the effectiveness of promoting SRI instruments.

5.3.1 Theoretical implications

This study has extended the research on investment decisions related to SRI by examining the influence of moral norm together with the core constructs of TpB. The role of intention as a predictor and mediator to decision – making behaviour towards SRI is further examined. These examinations resonate with the necessity to understand whether the constructs as stipulated in TpB together with moral norm are able to explain investors' behaviour towards. Theoretically, the implications of this study are as follows:

a. Through examining the influence of attitude and subjective norm on intention, this study helps to understand how subjective norm develops intention through attitude. This understanding is crucial in explaining how investors' intention is shaped by attitude which in turn is directly influenced by subjective norm. Although the relationship between TpB's constructs has been investigated in previous studies, evidence on the linkage of subjective norm and attitude within the context of investment decision – making on SRI is new.
b. It has been argued that attitude, subjective norm, and perceived behavioural control influence behaviour through intention. Moral norm is suggested as influencing both intention and behaviour, respectively. However, in the framework of TpB, only attitude and subjective norm are found to have significant influence on behaviour with intention as a mediator. Moral norm as an extended construct to TpB, is found to influence intention and behaviour, significantly. Intention is found to be formed by attitude, subjective norm, and moral norm. In turn, attitude is well explained by the outcome beliefs and subjective norm is explained by normative beliefs. In the context of this study, perceived behavioural control as stipulate in the TpB, is found to be insignificant in explaining intention and behaviour.
c. In respect to the paucity of studies that apply TpB to investment decisions linked to SRI and in the context of *Shariah* investment, the findings of this study offer evidence that the inclusion of moral norm can contribute significantly to the extension of the theory. Although the importance of moral norm as a critical variable to extend the TpB has been widely acknowledged, empirical evidence about the cause-and-effect of this construct remained under-studied.
d. Furthermore, this study offers a comprehensive examination of TpB, attempting to clearly define each of the underlying constructs in the domain of SRI, based on real investors' responses.

5.3.2 Practical implications for stakeholders

From various stakeholders' (SRI providers, lawmakers) perspective, this study highlights the key drivers that influence investors' decision making behaviour towards SRI instruments. The followings indicate how the study could implicate stakeholders:

a. Government, as a lawmaker, through its agencies like the central bank and Securities Commission, can influence significantly the promotion of SRI by presenting stimulating information and passing relevant laws. The central bank can put pressure on the banking industry to offer cheaper borrowing rates for businesses that triumph social responsibility goals (i.e.; corporate social responsibility, renewable energy). Apart from promoting social responsibility in the business environment, it also could encourage firms to strive for more efficiency through cheaper cost of borrowings and good corporate governance. Laws on listing requirements in the capital market that reflect firms' commitment to social responsibility should also be introduced. A special board of listing that consists of shares belonging to the firms that conform to SRI requirements could be created. For this to happen, the framework must not only reflect the government's commitment but also provide the avenue for firms as well investors to contribute further in developing a social responsibility environment, specifically in the capital market.
b. Opinions from leaders (such as corporate leaders, financial advisors), as indicates by the strong influence of subjective norm, can play an important role in communicating social agreements which could lead to promoting social responsibility environment in the financial markets. Regulatory bodies, such as the Securities Commission, can enhance the development of the SRI market by offering more SRI-focused seminars directed to financial intermediaries. These include stockbrokers, fund managers, and financial advisors. Consequently may enhance peoples' awareness of SRI. Financial intermediaries are the crucial entities in the value chain that connects investors to the financial market. As shown in this study, information received from financial advisors influences perceptions as well as investors' motivation to invest in SRI instruments. Financial advisors could focus on communicating how investors can realise their financial goals and at the same time be ethical or socially responsible when investing in SRI instruments.
c. SRI providers should be aware that financial goals, social pressures and investors' own personal standards are the major factors that influence their motivation to invest in SRI instruments. The study shows that investors' perceptions of the likely outcomes are very much influenced by what they want to achieve financially and the pressures of social conformity. These criteria shape investors' decisions explicitly and implicitly. Thus, in the perspective of SRI providers, this knowledge can be applied in their marketing strategy by focusing on the financial and social responsibility goals that can be achieved by investors.

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